

[By Nancy Remsen, Burlington Free Press](#)

During the next three years, Vermont's electric utilities plan to install electric meters at nearly every residence and business that doesn't already have state-of-the-art metering devices capable of communicating in real time about electricity use.

Every Vermont power company will be able to make a speedier upgrade to a "smart grid" system thanks to a \$69 million federal grant announced Tuesday by the U.S. Department of Energy. The utilities must match the money dollar for dollar, so the total investment will be \$138 million.

"This is everything we asked for," said a grinning Tom Evslin, newly named the state's chief technology officer. "This state will be an e-energy state by 2012."

Evslin spent the past year as chief of the state's Office of Economic Stimulus and Recovery and spearheaded development of the state's winning application.

Vermont's request was one of 400 competing for a share of \$3.4 billion, Evslin said. One hundred applications received funding, with Vermont winning 2 percent of the total.

"It is an extraordinary achievement for Vermont," said Rep. Peter Welch, D-Vt. The state competed successfully, he said, in part because of bipartisan support from the congressional delegation and Gov. Jim Douglas. "It is a huge economic shot in the arm," Welch said.

The statewide, automated metering system will mean lower utility bills for residential and commercial customers, he said. Customers will have information about when power is expensive and when their use is high, and they can make choices that save money.

Controlling power use, even cutting power use, may reduce the need for new power sources and expensive transmission projects, Evslin said. A smart grid also increases reliability and security.

"The utilities already had a smart grid plan," Evslin said. "Having this amount of federal money lets us compress an eight-year build-out to three years."

For Evslin, the most important benefit of a statewide smart grid will be its effect on economic development. It will help the state attract and retain businesses because of the savings such a system offers. "This is exactly the kind of thing we need to build the tax base," he said.

Some details

Vermont Electric Power Co., which operates the electric transmission system across the state, was the applicant for the grant. VELCO, as the company is called, will build what Sen. Vincent Illuzzi, R-Essex/Orleans, likened to an interstate highway — the fiber-optic backbone necessary to link meters to power companies.

Individual power companies will install meters. Central Vermont Public Service, for example, will put in 180,00 new meters for its 159,000 customers, spokesman Steve Costello said.

CVPS also will undertake a special project to test how to reach customers with information about their electricity use and how to influence how much and when they use power.

In a pilot project in Rutland in 2011, CVPS will offer some customers sophisticated in-home displays showing their power use and the demand on the grid. Others will see a light indicating load is heavy. Some might receive text messages or e-mails about peak demand. The goal will be to determine which communication methods are most effective, Costello said.

At the same time, the utility will test whether pricing affects customers' habits, he said. Some

customers will be offered financial incentives to decrease use when demand is high.

Vermont Electric Cooperative is a step ahead, having begun to establish a smart grid in 2005. Already 30,000 of its 38,000 customers have smart meters, said David Hallquist, chief executive officer. It has also set up an online system that allows customers to monitor their own use.

Now, in addition to completing its meter installation, Vermont Electric Cooperative will test the next phase of the smart-grid transformation: having appliances respond to peak loads and price.

"You can take any device and make it smart," Hallquist said. For example, using technology, "you can coast a freezer for four hours" — meaning cut off its power for a period of time without jeopardizing frozen foods.

The cooperative will test smart appliance technology in about 500 households next year, Hallquist said.

"If you as a customer can start managing your power, you are going to be doing a better job than we are," he said. "You can cut your bill."

The gamble

Evslin breathed a sigh of relief Tuesday morning when he received a call from Sen. Patrick Leahy's office with news of the grant.

Evslin said the state took a risk when it consolidated all its smart-grid initiatives into a single application. He and the governor met with Vice President Joe Biden in the spring to test the idea of a statewide initiative and came away believing they should give it a try. Still, with \$17 billion in requests vying for \$3.4 billion in grants, Evslin worried.

VELCO submitted the application Aug. 6 after six months of meetings involving the utilities, Evslin and other state officials, and congressional representatives.

Although cooperation among 20 utilities might be unusual outside Vermont, Dorothy Schnure, spokeswoman for Green Mountain Power Corp., said, "We have a history of working together. We suspect that was one of the real selling points."

The smart-grid project is tied to other initiatives the state would like to see federal stimulus dollars support: expansion of Internet access and the use of electronic medical records. Evslin said those applications are pending.